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Examining Gender and Socio-Economic Status on the Emotional Intelligence of Early Adolescents

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EXAMINING GENDER AND SOCIO-ECONOMIC STATUS ON THE EMOTIONAL INTELLIGENCE OF EARLY ADOLESCENTS

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Dissertation Approval

This is to certify that the thesis presented to us by Alicea J. Davis on the 2nd day of March, 2012, in partial fulfillment of the requirements for the degree of Doctor of Psychology, has been examined and is acceptable in both scholarship and literary quality.

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ABSTRACT

The purpose of this study was to examine emotional intelligence and its impact on the maturational process of male and female early-adolescent youth. Demographic variables, such gender, socio-economic status, ethnicity, and educational status were, valued against emotionality factors such as intrapersonal stress, interpersonal stress, adaptability, general mood, and overall emotional intelligence (EQ). The study utilized a non-experimental, correlational design examining archival data. The participants consisted of approximately, early adolescent fifth-grade students aged 10-13 years. The participants were administered the Bar-On Emotional Quotient Inventory (BarOn EQ-I:YV) and a demographic questionnaire. Descriptive statistics were used to describe the population sample. A Pearson correlation was used to determine the relationship between the Bar-On EQI scales. A MANOVA was used to determine significance between gender and the Bar-On EQI scales. An ANOVA was used to determine significance between total EQ and gender, ethnicity, and SES. The results concluded that girls generally reported stress-management abilities higher than those reported by boys. The higher SES group reported increased adaptability.

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CHAPTER ONE

INTRODUCTION

In the United States, children are facing a variety of stressors in the absence of appropriate coping mechanisms (Wang, Haertel, & Walberg, 1993). This is particularly evident for the early-adolescent group (ages 10-11 years) because during these years adolescents experience biological, cognitive, and social-emotional changes in the midst of developing relationships with peers, parents, and teachers, as well as of transitioning to a new school (Jose & Kilburg, 2007; Roeser, Eccles, & Sameroff, 2000).

Research suggests that gender differences in relation to social-emotional development are evident during childhood and adolescence. Keiley, Bates, Dodge, and Pettit, (2000) and Lahey, et al. (2000) report gender differences in behavior problems, such as aggressive behavior and antisocial behavior (externalizing problems), during childhood and adolescence, with boys showing rates of these problems higher the rates shown by girls. However, early-adolescent girls have been found to be more affected by interpersonal stressors that lead to internalizing problems, such as depression (Hampel, Meier, & Kummel, 2008).

It has become increasingly evident that the early-adolescent age group represents a disproportionately high rate of failure – academically and emotionally, as of a result of the inability to recognize, cope, and manage stress. Roeser, Eccles, & Sameroff (2000) estimated that 25 to 50% of all young people between the ages of 10 and 17 years are at risk for decreased educational, economic, and social opportunities because of high stress levels resulting from inappropriate coping mechanisms and/or stress management. It is also reported that 60 to 80% of at-risk youth come from low socio-economic backgrounds (Roeser, Eccles, & Sameroff, 2000).

Increasing research suggests that evidence-based school programs designed to educate early adolescent youth about stress and to teach useful coping mechanisms can have a positive effect on psychological adjustment (Durlak & Wells, 1997). However, prior to implementing intervention/prevention programs, schools should conduct school and community risk and needs assessments in order to identify specific social and emotional needs (Zins, Elias, & Greenberg, 2003).

Need For Study

The body of literature regarding the development and management of stress in middle and late adolescence, as well as in the adult populations has increased. However, limited research exists regarding gender, stress and coping as they relate to variables, such as socio-economic status, educational status (regular/special), race, and school transitions. Further research centered around these concepts could lead to greater understanding of the early adolescent group through their self-repots, which, in turn, can lead to school districts providing effective intervention.

Statement of the Problem

Teachers are finding that stress in children causes a number of different behavioral issues that are all considered barriers to gaining a decent education (Beebe-Frankenberger, Lane, Bocian, Gresham, & MacMillian, 2005; Webster-Stratton, Reid, & Hammond, 2004). Children who, for a variety of reasons, find themselves unable to cope with peer pressures on the playground, interpersonal stressors, and the demands of learning in a classroom are

particularly disadvantaged, as studies have shown that teachers tend to react negatively to the misbehaving child (Lane, Givner, & Pierson, 2004).

In the past, it was assumed that children who did not perform well in the class were either mentally unfit or plain unruly, and were punished accordingly. An increasing body of literature supports the idea that many children who are "failing" at school are doing so because of their lack of social-emotional development, coupled with their inability to identify and cope with stress (Chandler, 1984).

It is not at all unfeasible to suggest in modern society that children can and do suffer from an inability to cope with stress. Traditionally thought of as an adult problem, researchers now are reaching conclusions that show that an individual child can be impacted negatively by a range of different social issues and changes to family dynamics (Appleyard, Egeland, Van Dulmer, & Sroule, 2005).

Now, more than ever, children have to cope with a variety of parental and social concerns, such as, parental breakups, being raised in single-parent family households from birth, poverty, and being victims of family

dysfunction, including the abuse of substances in the home, domestic violence, and even child abuse. Even children in typical mainstream home environments can be impacted by family dysfunction, as research has shown that issues such as substance abuse and domestic violence are not restricted to low socioeconomic family units (; Anshel & Delany, 2001; Bradley & Corwyn, 2002, Garmezy, 1983).

In cases where the family unit is also impacted by poverty, it is less likely that the child will be assisted with his/her own problems in a household that most likely contains overstressed parents. Stress on parents can result in inconsistent or unstable parenting activities, especially in terms of creating protective boundaries for their children or nurturing them in times of stress (Anthony, Anthony, Glanville, Naiman, Waanders, & Schaffer, 2005). In such situations the child must learn how to cope with stressors her or she perceives within the home and school environments.

The outcome for these children does not necessarily have to be negative, however, as more researchers are finding that intervention programs during a children's lives can and do increase their ability to respond to

stress in a more positive manner and cope with the impact of stressors they cannot control (Hampel, Meier, & Kummel, 2008; Zins, Elias, & Greenberg, 2003). Programs, such as Youth Understanding and Managing Stress (Romano, Miller & Nordness, 1996), Capable Kids (De Wolfe & Saunders, 1995) and the Rochester Child Resilience Project (Pincus & Friedman, 2004), have proved to be successful, school-based programs.

The process of designing an intervention program must include a data collection component, which can be accomplished through items such as student self-reports (Zins, Elias, & Greenberg, 2003). This process helps with identifying the needs of the population being addressed. While a child's home environment always will be a mitigating factor in any intervention program, as will a child's own personality traits, a number of research findings show that the school environment is of particular benefit in improving psychological adjustment and thereby improving academic outcomes for individual children (Brooks, 2006; De Wolfe & Sanders, 1995).

The literature available regarding a child's perspectives on stress and social skills is quite extensive

and will be covered in more detail in the literature review. Taxis, Rew, Jackson, and Kouzekanani (2004) found that self-reporting among young children about stress was not very effective in that many children described situations relating to feeling ill rather than to any major stress factors. This was attributed to the fact that younger children perceive the world in a different way compared to early-adolescent youth, and this factor had to be considered when considering developing interventions. Nettles, Mucherah, and Jones (2000) determined that intervention needs to include increased access to resources and the development of adaptive processes, while Luthar (1991) and McGinnis and Goldstein (1997) both felt that developing inter/intrapersonal and stress-management skills is instrumental in providing better outcomes for youth.

Purpose of the Study

The purpose of this study is to examine emotional intelligence and how it impacts the maturation process of male and female early-adolescent youth. More specifically, gender, race, socio-economic status, and education status (variables) will be valued against emotionality factors - adaptability, interpersonal and intrapersonal stress,

general mood, and stress management. The following research questions will be addressed:

1. What is the relationship between the BarOn EQ-I:YV (BarOn)scale raw scores and gender?
    - 1a. Are females greater than males on intrapersonal stress?
    - 1b. Are females greater than males on interpersonal stress?
    - 1c. Are females greater than males on adaptability?
    - 1d. Are females greater than males on stress management?
    - 1e. Are females greater than males on mood?
    - 1f. Are females greater than males on EQ?

2. What is the relationship between the (BarOn)scale raw scores and socio-economic status (SES)?
    - 2a. Will the students in the upper SES category score higher on intrapersonal stress?
    - 2b. Will the students in the upper SES category score higher on interpersonal stress?
    - 2c. Will the students in the upper SES category score higher on adaptability?
    - 2d. Will the students in the upper SES category score higher on stress management?
    - 2e. Will the students in the upper SES category score higher on mood?
    - 2f. Will the students in the upper SES category score higher on EQ?

3. What is the relationship between (BarOn) scale raw scores and ethnic group?
    - 3a. Will Caucasians score higher than ethnic minorities on intrapersonal stress?
    - 3b. Will Caucasians score higher than ethnic minorities on interpersonal stress?
    - 3c. Will Caucasians score higher than ethnic minorities on adaptability?
    - 3d. Will Caucasians score higher than ethnic minorities on stress management?
    - 3e. Will Caucasians score higher than ethnic

minorities on mood?

3f. Will Caucasians score higher than ethnic minorities on EQ?

Summary

Early adolescence is marked by significant maturational processes that can increase vulnerability to various stressors. Research suggests that these stressors can impact male adolescents and female adolescents differently. Male adolescents tend to present with externalizing problem behaviors, while female adolescents demonstrate internalizing behaviors. These behaviors often impede educational, social and emotional development. School-based programs that focus on teaching appropriate coping mechanisms and stress management have been beneficial in improving the well-being of youth.

CHAPTER TWO

REVIEW OF LITERATURE

Introduction

Educators traditionally have assumed that children acquire social skills as part of their natural development or will acquire them once they enter the classroom (Ogilvy, 1994). By three years of age, children are capable of recognizing different emotions by paying attention to nonverbal cues and have a fledgling grasp of the causes of feelings, such as happiness, sadness, and fear (Elksnin & Elksnin, 2003). Upon entering school, they are expected to have basic expressive and receptive language skills, the ability to comply with instructions, a problem-solving repertoire, and a range of interpersonal skills (Lane, Givner, & Pierson, 2004). During this time, however, little attention has been paid to their social-emotional development.

As children advance in grade level, social and behavioral expectations become more rigorous, and students who fail to exhibit self-regulatory and collaborative skills risk negative outcomes within and beyond the school (Lane, Pierson, & Givner, 2003, 2004). In effect, "to

succeed in school, family, friendships, the work-place, community life, and democratic participation, students need a full complement of skills — social, emotional, and academic" (Elias, Bruene-Butler, Blum, & Schuyler, 1997, p. 16). In reality, many children do not enter school with adequate social skills nor do they develop a complement of social, emotional, and academic competencies without intervention. For the past century, teachers across the globe have been concerned with students' classroom behavior, recognizing that poor classroom adjustment may predict later delinquency (Poulou, 2005). Children with problem behaviors often become alienated from school and attempt to escape school discipline through absenteeism and truancy (Beebe-Frankenberger, Lane, Bocian, Gresham, & MacMillan, 2005). The negative consequences are highlighted by the fact that students who drop out of school account for as many as 80% of all criminal acts (Poulou, 2005).

It is not unwarranted that mental skills such as, the ability to cope with stress, maintain a positive attitude, relax when needed, and focus attention on achieving personal goals, are conceptualized as "life skills"

(Gilbert & Orlick, 1996). Gilbert and Orlick are among numerous sources that recognize the critical importance of teaching skills to elementary-school children that will help them direct the course of their lives. Although traditionally categorized as "social skills training," an alternative term is "social and emotional learning" (SEL). SEL is defined as "an approach that teaches individuals to recognize, regulate, and express the social and emotional aspects of their lives so they can successfully manage life tasks" (Norris, 2003, p. 314). The conceptual distinction is that SEL implies a curriculum for all students, whereas 'social skills' training typically denotes a more targeted intervention for children who manifest deficits in one or more skill areas (Lane, Menzies, Barton-Arwood, Doukas, & Munton, 2005; Ogilvy, 1994). An estimated 15 to 22% of children and youth in the United States have social-emotional problems that merit intervention (Elksnin & Elksnin, 2003).

Bandura (1986) described one of his four sources of self-efficacy, somatic and emotional states, as particularly pertinent to understanding the impact of stress on children's social-emotional development. Stress,

tension, anxiety, and depressed mood diminish self-efficacy, while a positive mood and enthusiasm reinforce it. The relationship is bi-directional. Confident in their abilities, individuals with high self-efficacy approach tasks positively and energetically while those with low self-efficacy may view the same tasks as stressful or intimidating. Although self-efficacy and self-esteem are distinct types of self-concepts, they are frequently inter-related.

A framework for understanding childhood stress involves the interaction of several categories of stressors: extra-familial or environmental stressors, intra-familial stressors, and child characteristics (Webster-Stratton, 1990). Poverty is one aspect, for example that is consistently implicated as an overarching cause of stress (Bradley & Corwyn, 2002). Low-income families are subject to more threatening and uncontrollable life events, exposed to more environmental dangers, and are more likely to experience destabilizing events, such as family dissolution and frequent mobility. Attempting to cope with the stressors of poverty adversely affects the capability of parents to provide their children with a

nurturing environment. This, in turn, can affect self-regulatory processes in the developing child, with the possible result that the child will develop behaviors that further strain parents' limited coping abilities. Harsh parenting and child abuse are more common in low-income homes and the damaging consequences of negative parenting have made parent training a key component of Head Start programs (Webster-Stratton, Reid, & Hammond, 2001, 2004). A sizable proportion of abused or neglected children develop prosocial skill deficits but research has shown that interventions and social skills training can reduce the incidences of later anti-social behaviors (Howing, Wodarski, Kurtz, & Gaudin, 1990).

According to McCubbin and Patterson (1983), the family stress theory offers a framework for conceptualizing the way families perceive and adapt to stressors. The adolescents' perceived level of individual and family stress is particularly poignant in the adaptation process. For example, research has found that adolescents' satisfaction with family life, especially family economic stability, is related to increased emotional regulation, which leads to improved adaptation (Papini, Farmer, Clark,

Micka, & Barnett, 1990). Clark-Lempers, Lempers, and Netusil (1990) found a positive relationship between family financial stress and adolescents' reports of depressive symptoms. In another study of adolescents' reactions to family financial stress, youth reported a variety of worries and feelings of pressure and helplessness (Van Hook, 1990). In addition to stressor events, the coping strategies that families use relate to adolescent adaptation (Carson, 1995). McCubbin, Larsen, and Olson (1982) identified several coping strategies that families employ in response to stress: acquiring social support, refraining, seeking spiritual support, mobilizing the family to acquire and accept help, and passive appraisal. Incorporating such coping strategies has been found to be related positively to adolescents' family life satisfaction (Elder, Conger, Foster, & Ardelt, 1992; Jurich & Russell, 1987; Patterson & McCubbin, 1987).

The concept of childhood stress often is addressed from the perspective of risk and resilience. A large body of evidence shows that the cumulative impact of multiple stressors increases the risk that children will develop problems (Appleyard, Egeland, Manfred, Van Dulmer, &

Sroufe, 2005). For example, Doll and Lyon (1998) delineated environmental hazards, ineffective or uncaring parenting, abusive treatment, and family dysfunction as four constellations of factors that predict negative adult adjustment. However, the authors concede that clarity about the relative weight of each aspect is minimal.

Resiliency research has documented the vital importance of at least one adult on whom the child can depend (Garmezy, 1983; Rutter, 1983). Children who grow up under adverse conditions and seem to be "stress invulnerable" or "stress resistant" invariably have at least one adult figure who provides them with unconditional support. In the absence of positive parental support, extended family members, teachers, counselors, social workers, or other caring adults have the capacity to foster resilience in children.

Problem-solving resources and social support have been found to buffer the effects of stress in school children (Dubow & Tisak, 1989). Teachers give higher behavioral ratings to students who possess these skills, which are consistent with expectations for classroom behavior (Lane et al., 2003; Lane, Givner et al., 2004; Lane, Pierson et

al., 2004; Lane, Wehby, & Cooley, 2006). Children who are deficient in social skills are most in need of social support. However, disruptive, aggressive, or apathetic behavior provokes negative responses in peers and adults alike. Consequently, problem-solving and social skills are integral parts of interventions for even young children (Webster-Stratton, Reid, & Hammon, 2001; Webster-Stratton & Reid, 2004). Problem-solving and social skills are part of the "Skills for Dealing with Stress" component of the Skillstreaming program (McGinnis & Goldstein, 1997).

The following section will focus on stress from the perspective of risk and resilience. Additional sections of this chapter will discuss adolescents' experiences and perceptions; gender; differences; emotional intelligence, and a summary.

Stress, Risk, and Resilience

Exposure to stress provokes physiological, emotional, and behavioral responses. The immediate and long-range effects of stress exposure can be explained by the concept of *allostatic load* (Bradley & Corwyn, 2002). *Allostasis* "refers to the body's capacity to adapt and adjust to the demands imposed by environmental stressors via

physiological changes" (p. 383). Bradley and Corwyn's (2002) focus is on the impact of stressors related to low socioeconomic status (SES) on child development. Stress may have different effects over the course of a life span, and the authors note that research is limited on the precise mechanisms that underlie stress responses in children.

Some evidence has shown that early stress exposure can cause disregulated hypothalamic-pituitary-adrenal axis activity (an underlying cause of hyperactivity); disregulated serotonin activity, which may increase risk for hostility and suicide; and impaired immune system functioning, which increases susceptibility to illness.

Much of the research on stress, SES, and childhood development focuses on the adverse effects of poverty on parents. Unrelenting stress, uncertainty, and low social status associated with poverty can induce a sense of powerlessness, diminished self-esteem and self-efficacy, and learned helplessness that manifest in states such as depression, anxiety, and hostility, all of which undermine interactions with family and friends and thereby leading to possible isolation from social support. This, in turn, may

lead to the use of excessively harsh or lax control strategies in parenting children, as well as to lack of warmth or responsiveness towards the child. As a result, children are deprived of experiences that promote self-esteem and positive social adjustment both within their immediate family unit and extended family outside of the home.

Researchers have found that "the absence of positive parenting, not just the presence of negative parenting," is the mechanism connecting low SES to child adjustment (Bradley & Corwyn, 2002, p. 384). Parents' involvement with children and optimism in the face of adversity have the potential to compensate for negative aspects of parenting. Even among children who develop behavioral problems, competent parenting (despite family stressors) is associated with less severity and more positive outcomes for social-skills interventions (Webster-Stratton et al., 2001). Conversely, children whose parents are harsh, coercive, or punitive are likely to derive limited benefits from programs that do not include a parent training component (Webster-Stratton et al., 2001; Webster-Stratton & Reid, 2003).

For the purpose of the present study, Chandler (1984) offered a definition of stress:

> …a state of tension arising from events or situations, which the individual perceives as threatening. This state of emotional tension acts as a motivator as the individual, seeking drive reduction, attempts to cope with stress. That very attempt to cope may result in a number of stress responses ranging from healthy, effective ones to pathological ones that are not only ineffective, but are often counterproductive. In the case of children extreme responses result in behavior that calls attention to itself and interferes with effective functioning at home, in school, and in social relationships. (p. 48)

The bi-directional nature of stress is evident in Chandler's (1984) definition. Webster-Stratton (1990) stated explicitly that "anyone who has worked with a conduct-problem child has undoubtedly been aware that the child's family was experiencing considerable stress" (p. 302). The author's conceptual model is based on the assumption that whether resulting from extra-familial factors, interpersonal factors, or child factors, the

presence of stressors creates a situation that demands a coping response from parents. The impact of these stressors on family functioning and interactions with children is contingent on each parent's psychological well-being and personal resources, as well as on social and/or family support.

Certain individual and family factors have been identified as protective factors or *buffers* against the effects of stress on family functioning, while others have been identified as vulnerability factors that exacerbate the family's reactions to stress (Webster-Stratton, 1990). Important factors include the psychological characteristics of the parent, social support versus isolation, parent's gender, and parent's use of drugs. Social support has been identified consistently as a protective factor against stress, whereas social isolation or *insularity* has been linked with negative parenting and is common among parents of children who display problem behaviors. Probably because their greater role in child-rearing or of internalized guilt over inadequate parenting, mothers report more stress in dealing with child behavioral problems. Finally, parental substance abuse is associated

with punitive discipline and lax monitoring of children's behavior (Webster-Stratton, 1990).

Webster-Stratton (1990) is a staunch advocate of early intervention for families of children at risk for behavior problems (Webster-Stratton, 1990). Empirical evidence that supports the fact that young children can benefit from a social skills and problem-solving curriculum (Webster-Stratton et al., 2001; Webster-Stratton & Reid, 2003). Positive results can be enhanced further with the addition of parent and teacher training (Webster-Stratton et al., 2004). However, many children enter elementary school lacking the requisite skills for academic and social success.

Compared to adults, children have limited resources for coping in several important ways. Foremost, children are dependent upon adults, and they lack adult independence and mobility (Chandler, 1984). Second, they have a limited repertoire of coping strategies. Third, children lack the reasoning skills of adults; without the ability to conceptualize choices, they have lower tolerance for frustration and delayed gratification. Gilbert and Orlick (1996) emphasized that life skills programs for children

must be tailored specifically for their age. Some programs fail because they are based on adult models.

Ironically, despite the consensus that stress has detrimental effects on children as well as on adults, research on stress in children is somewhat limited (Bradley & Corwyn, 2002; Webster-Stratton, 1990). One issue confronting educators and counselors is how stress affects cognitive and behavioral functioning at different stages of development (Bradley & Corwyn, 2002). In their study of cumulative risks, Appleyard et al. (2005) examined the impact of stressors in early and middle childhood on adolescent functioning. The participants were 171 adolescents involved in an ongoing, prospective, longitudinal study of developmental outcomes in at-risk urban children. Poverty was the decisive inclusion criterion. Risk factors were those that routinely appear in the literature, such as family instability, family stress, domestic violence, and child abuse.

The results supported the "cumulative risk hypothesis," namely that "the number of risks in early childhood predicts an increase in behavior problems in adolescence" (Appleyard et al., 2005, p. 241). Cumulative

risk in middle childhood was not associated with behavioral outcomes unless it was preceded by the presence of multiple risk factors in early childhood. The researchers acknowledged that their focus was primarily on risk factors, such as abuse and violence, that are associated with externalizing behavior, noting that other factors such as maternal depression, may be related more to internalizing behavior patterns, particularly in conjunction with other stressors.

Anthony et al. (2005) explored the relationship between parental stress, parenting behavior, and children's social competence in a sample consisting of 229 children enrolled in two Baltimore Head Start programs, 78 children attending three private daycare centers, and their parents and teachers. The researchers found significant interactions between children's classroom adjustment and elements of parenting stress. Consistent with Webster-Stratton's (1990) model, parenting stress was derived from both individual factors and parent-child interactions. Parenting stress was associated with stricter discipline and less nurturing behavior and had a pronounced impact on children's social competence (Anthony et al., 2005).

Parents' expectations for their children's behavior only weakly moderated the relationship between parenting stress and externalizing behavior.

Quamma and Greenberg (1994) investigated the role of family social support and social problem-solving skills on buffering the impact of stressful events on children's behavioral adjustment. The participants were 322 fourth and fifth grade students who related stressful events they had experienced over the last year. Illustrating the negative effects of stress, high levels of stress manifested in terms of externalizing problems reported by teachers and anxiety and conduct problems reported by students. Family support mediated these effects, although social problem-solving skills affected only children's reported conduct problems and did not address anxiety in the child or other issues. High levels of family support had a positive effect on the adjustment of students who were exposed to substantial stress (Quamma & Greenberg, 1994).

Understanding Resilience

The buffering effect of family support on stress experienced by children is consistent with the notion of

resiliency. Historically, children identified as "at risk" were seen through the lens of a deficit model (Howard, Dryden, & Johnson, 1999). The concept of resilience arose from the observation that most children, even those exposed to multiple stressors, grew up to be healthy, well-adjusted young adults. A key factor in resilience was the presence of a caring adult (Garmezy, 1983; Rutter, 1983). In addition to social competence and problem-solving skills, internal resources linked with resilience include autonomy and a sense of purpose and hope for the future (Howard et al., 1999).

Howard et al. (1999) noted that Rutter, who was instrumental in developing the concept of resilience, raised the issue of whether the shift from *risk* to *resilience* is actually a semantic rather than a conceptual change. Many protective factors identified in research are simply opposites of identified risk factors. According to Rutter, a factor or process is protective only if it moderates a risk factor. He delineated four types of protective processes: (a) those that reduce the impact of or exposure to risk; (b) those that reduce negative chain reactions following bad events or experiences; (c) those

that promote self-esteem and self-efficacy through accomplishment; and (d) the development of positive relationships and new opportunities that provide essential resources or alter the course of one's life.

Based on an extensive research review, Howard et al. (1999) delineated a number of "best practices" for promoting resilience in students. Their ideal classroom setting reflects the learning environment outlined by Elias et al. (1997). Elias et al. (1997) recognized that classroom activities must be strategically structured to facilitate social and emotional development. Although it is fair and accurate to say that most children labeled "at risk" by virtue of poverty or related stressors do not become antisocial, a significant number of children enter school with risk factors that outweigh resilience and require intervention to develop protective processes.

In fact, while criticizing the deficit model, Howard et al. (1999) conceded that "this approach has spurred many imaginative, practical, and useful interventions" (p. 309). The flaw in the deficit model is that teachers may blame students for their problems or have low expectations for academic or social performance. However, it is essential

to acknowledge that many children enter school with deficits that are amenable to change by well-designed interventions.

Several authors share the perspective that schools are the ideal place to implement interventions intended to foster resilience (Brooks, 2006; Doll & Lyon, 1998). The school serves as both an environment with the power to minimize risks factors and a place where children must learn to master the skills needed to become competent adults (Brooks, 2006). Doll and Lyon (1998) stated that "For those students who are at greatest risk due to accumulation of multiple risk factors, schools may represent one of the most potentially protective environments—encouraging the development of good problem-solving and academic skills, individual talents and other productive activities, and social competence" (p. 356). This implies that educators perceive these activities as an integral part of the school's mission and are willing to reach out to at-risk students although this has not been proved through research studies.

Children's Experiences and Perceptions

Resiliency theory and the stress-coping paradigm of Lazarus and Folkman (1984) served as the conceptual framework for understanding how children experience and perceive stress. The key concepts in the paradigm are stress, appraisal, and coping. Coping is defined as "the process of using cognitive and behavioral strategies to manage or alleviate the perceived stress and the resultant affective state" (Taxis et al., 2004, p. 478).

Taxis, Rew, Jackson, and Kouzekanani (2004) explored the relationship of protective resources (specifically, social belonging and coping skills) to the perceptions of stress in 613 white and Hispanic 8 to 12 year old children. Of the students, 98% experienced fairly low levels of stress (Taxis et al., 2004). The children's main stressor was "feeling sick", and there was no evidence that it reflected stress-related somatic complaints. Rather, Taxis et al. suggested that, "owing to their limited life experience, children may experience physical illness as a significant psychological, social, and physical stressor" (p. 481).

The students' two most frequently endorsed coping strategies were "watch TV or listen to music" and "draw, write, or reading something," which Taxis et al. (2004) classified as "distractions" (p. 481). While immersing oneself in creative activities may reflect positive coping, the use of television as a coping mechanism is problematic. Gilbert and Orlick (1996) observed that after participating in a life-skills program, second-grade children most often used active coping strategies, such as physical activity or relaxation techniques, and were less likely to turn to passive entertainment.

Peer relationships can be stress producing or stress protective for children. An interesting finding reported by Taxis et al. (2004) was a significant correlation between sense of humor and social connectedness. While research confirms the positive impact of humor on the well-being of adults, humor has been given scant attention in children. Taxis et al. suggested that humor may be an "untapped resource" that can be developed to children's benefit.

Using resiliency research as a framework, Nettles, Mucherah, and Jones (2000) investigated the mediating

effects of social resources on African American students using data from elementary-school students in an impoverished, high-crime community and projects involving other students from similarly disadvantaged backgrounds. By all accepted definitions, these students are classified as "at risk," yet there was ample evidence that social resources have the power to buffer the negative consequences of poverty.

Nettles et al. (2000) conceptualized social resources in terms of two coping strategies: increasing resources and building on adaptive processes. Specifically, "resource-focused strategies seek to reduce the negative consequences of exposure to risk by increasing the level of resources or improving access to resources" (p. 57). Social resources included caring parents who convey high expectations for their children and are involved in their education, participation in extracurricular activities, and supportive teacher-student relationships. In addition to positive resources at home and at school, Nettles et al. (2000) also emphasized the importance of providing children and youth (particularly adolescents) with opportunities to interact with adults in community settings. Their research shows

that relationships with supportive adult role models help instill a sense of optimism in adolescents and are linked with extracurricular involvement and academic success.

Erikson (1950) recognized that once children enter school, it becomes the central point of their psychosocial development. For most students, self-esteem is linked intrinsically with academic success. Several advocates of social and emotional learning emphasize that the philosophy of SEL is congruent with educational standards (Elias et al., 1997; Norris, 2003). Theoretically, the self-regulatory and problem-solving skills that are part of SEL and social-skills programs are applicable to academic contexts, and a large body of research documents a connection between self-efficacy and academic performance (Bandura, 1997). However, the Australian students clearly thought teachers and parents should provide students with more concrete assistance for academic success (Howard & Johnson, 2000).

The results of the elementary-school study demonstrated that children's exposure to neighborhood violence had a significant negative impact on their academic performance (Nettles et al., 2000). Nettles et

al. (2000) emphasized the importance of targeting interventions to reduce the detrimental impact of violence and/or to increase children and family's access to social-support resources. They also recommended building on strategies that enhance adaptation to stressful environments. Consistent with Howard et al. (1999), Nettles et al. (2000) called on teachers to create caring, supportive learning environments that provide students with opportunities for mastery experiences as a means of promoting resilience.

Luthar (1991) conducted a study of stress and coping in a sample of 144 ninth-grade students attending an urban, inner- city school. Their emphasis was on the role of personal resources. One key protective mechanism was internal locus of control, which was linked with assertion in the classroom. In contrast to their peers with internal locus of control, the performance of students with an external orientation declined under increasing stress, reflecting the notion of learned helplessness. McGinnis and Goldstein (1997) considered providing students with opportunities for self-mastery to boost self-esteem and thereby effectively counteract externality and consequent

learned helplessness. Self-esteem typically increases when children realized that they have the competence to affect outcomes.

Social skills, particularly social expressiveness, increased students' popularity with peers and had a significant protective effect on stress (Luthar, 1991). Virtually all sources reviewed for this project agree that social skills are essential for buffering against stress and can be taught effectively through interventions. Intelligence and positive life events proved to be a vulnerability rather than a protective factor, although most studies report the reverse and suggest that intelligence and having a positive outlook can be a protective factor. One finding consistent with the bulk of research is that ego development had a powerful protective effect. Ego development was associated positively with academic performance and classroom assertion and correlated negatively with disruptive behaviors.

Howard and Johnson (2000) investigated childhood resilience in a qualitative study of 9 to 12 year-old children and their teachers drawn from economically disadvantaged schools in South Australia. The participants

(125 students and 25 teachers) were asked initially what they thought was a "tough life" and why "some kids have a tough life and don't do O.K.," or alternately, "have a tough life but do O.K." Using their responses as a conceptual basis, the researchers delved into what made the difference between children with positive and negative outcomes.

Both teachers and students acknowledged the importance of the family in promoting resilience in children who had a "tough life" (Howard & Johnson, 2000). The most important relationships were between parents and children, with other family members playing a supportive role. An intriguing distinction between the responses of teachers and students was the emphasis the students placed on academic support in both the home and school setting. Whereas teachers focused on the school's role in creating a comfortable and secure environment and teaching social skills, the students "talked less about the school's role in providing social support and much more about providing special help to overcome learning difficulties" (p. 329).

Students and teachers agreed that the school played a role in fostering social and emotional development in

children with "tough lives" (Howard & Johnson, 2000). However, there were differences in their responses. The teachers placed more emphasis on their responsibility for creating a safe, secure learning environment while the students were more concerned about interactions with peers. To the students, being bullied seemed to be a major cause of a "tough life." This phenomenon appears to be universal and is an underlying cause of the proliferation of SEL programs.

The students cited discussing problems with understanding teachers and counselors as an important mechanism for reducing the stress of a "tough life" (Howard & Johnson, 2000). However, with their overriding emphasis on academic help, the students gave higher priority to programs such as a Learning Assistance Program in which mentors from outside the school came to work with individual students. The most striking result of the study was the marked discrepancy between teachers and students. Teachers may regard social skills and a positive learning environment as precursors to academic success and, therefore, view academic success as an implicit result. However, children think in concrete terms and are acutely

aware of the adverse effects of academic difficulties on future success.

A U.S. study of stress in fourth and fifth grade students confirmed that academic performance is a critical issue for children. Asked to cite the two things that made them most nervous, students revealed that academic concerns topped the list (Romano, 1997). The most prevalent stressors were tests (including test preparation, test-taking, and grades), cited by 15% of the students; academic/school concerns (13%); and oral presentations (13%). Next on the list were peer relationships (10%) and athletic performance (10%), followed by family stressors, nonathletic performances (e.g., dance recitals or plays), personal safety, and health. Only 3% of the students identified being in trouble as a personal stressor.

The greater emphasis the teachers surveyed by Howard and Johnson (2000) placed on social rather than academic factors in promoting resilience may reflect an implicit connection between the social and academic dimensions in school success. A series of studies conducted by Lane et al. (2006) and colleagues showed that teachers have certain expectations for classroom behavior that they deem

essential to success within and outside of the school. The researchers contended that understanding teachers' expectations of prosocial classroom behavior can be used to design, improve, and evaluate social-skills interventions and to help ease the stress for students making transitions from one school to the next (Lane et al., 2006).

Gender Differences

Many of the studies conducted on children and stress have focused primarily on the biological nature of stress and whether or not biological factors are impacted by gender in terms of stress development. Davis and Emory (1995) sought to determine if hormonal differences between male and female newborn children were correlated with stress reaction and gender differences. The procedure used was relatively invasive in that the researchers took cortisol readings from inside the baby's mouth and monitored the heart rate with electrodes placed on the chest area.

The findings of the study indicated that male babies were more inclined to show differences in their cortisol levels that peaked up to 15 minutes after the experiment was completed. In contrast, female babies showed an

increase in heart rate, but not in cortisol levels. Further, the stress reaction of female babies was also considered to be less because their heart rates returned to normal within 10 minutes rather than the 15 minutes it took for the male babies' heart rates to return to normal. Although the findings were not conclusive, they were indicative of the fact that male and female experience and react to stress differently, with the male showing a stronger reaction to stress that took longer to recede. One of the limitations of this study was that the very nature of the study itself was a stressor.

To further examine gender differences, Fox, Bell and Jones (1992) also measured the stress reactions in infants but they used a less invasive procedure. These researchers measured brain activity of 33 newborns while the newborns were experiencing their stress (the action for which was removing the child from his or her mother). From a brain-activity perspective those children who exhibited increased asymmetrical activity in the brain were more likely to show outward signs of distress, such as crying, while those children who showed the most activity in the right frontal lobe were those most distressed by the incident. Again,

although the findings were not conclusive, the authors did note the male children displayed the most distress in being taken away from their mother (Fox et al., 1992).

Monitoring stress in newborns is difficult simply because the researcher must assume levels of distress from physical signals shown by the individual baby and then compare those findings to the physical signs of other babies. Although both studies mentioned here monitored physical symptoms that could be indicative of stress assumptions, particularly regarding female newborns and stress could be subject to differing interpretations. Both studies found that male newborns showed more physical signs of stress and took longer than female newborns to recover from that stressful action, but as stress in children, even young ones, could be dependent on a number of other factors aside from physical indicators, these findings can be discussed only in context, rather than with any conviction.

Moving on to slightly older children, Karns, Meredith and Wang (2003) completed a study on preschool children in China and their reaction to stress. In this study, the children were given specific instructions regarding the toys they could play with and the toys they had to leave

alone. Using observational input, the authors believed that those children who did not follow the properly the instructions given and played with toys they were told to leave alone were most likely to show outward signs of stress, such as nervousness at getting caught or guilt. Karns et al. (2003) determined from their study that, once again, female children showed the least amount of stress during the exercise but the authors were not clear as to whether this was because they did not care as much if they disobeyed instructions or was because they exercised more self-control and were less likely to disobey the instructions in the first place.

Causey and Dubow (1992) looked at the aspect of stress from an elementary-school perspective based on children's ability to cope with stress that arose from interactions with school peers and the school system itself. Once again, these authors found strong differences between male and female subjects, supporting the fact yet again that female children had a better or higher level of coping with stress than that exhibited by male children. Specifically, they found that female children were more likely to use

problem-solving techniques or seek out social support than were male children (Causey & Dubow, 1992).

A later but similar study conducted by Anshel and Delany (2001) concentrated on studying child athletes between the ages of 10 and 12 years. They found that the coping mechanisms were different according to gender in that male children became more resigned to their situation when stressed whereas female children appeared to be more proactive in that they used confidence-building self-dialogue and other methods to help themselves feel better about a situation (Anshel & Delany, 2001).

Smith and Prior (1995) found that in a group of eighty-one children who came from stressful family situations, gender was not a predictive factor in determining a child's ability to cope with stress. These findings were supported by a later study by Ruckman, Burts and Pierce (1999), who found that children who were in an inappropriate class situation for their level of ability showed no clear correlations between gender and stress, even though these researchers had hypothesized, based on previous literature, that male children would show more stress signals than would their female counterparts.

Although the literature is sparse, a few researchers have addressed the concept of gender role conflict as a source of stress for the adolescent population (Blazina & Watkins, 2000; Heilbrun, 1981; & Shaw, 1983). Children initially learn gender stereotypes and biases in the home. Ultimately, these attitudes and behaviors are reinforced by peers, school experience, and the media as children assimilate into adolescence (Eccles, Jacobs, & Harold, 1990). Gender role socialization has emerged as a proponent of emotional distress in adolescent girls as well as boys. Hill and Lynch (1983) postulated that many girls and boys experience pressure to conform their behavior to gender expectations as they reach puberty, and as a result, problems develop. Whereas adolescent girls tend to develop internalizing problems, such as depression, adolescent boys acquire externalizing problems, such as aggression and antisocial behavior (Kovacs, Obrosky, & Sherrill, 2003).

A number of different reasons could impact this lack of conclusive findings with relation to stress and gender. The findings presented here do show, for the most part, that female children react differently and (according to

the research) to a lesser degree to stress than do their male peers, but even that, cannot be predicted with any certainty, as shown by the studies from Smith and Prior (1995). What is clear from this section of research is that although male and female children do react to and deal with stressors in different manners. As children get older, their reactions to stress are impacted more by environmental elements, such as prior life experiences and personality traits, than by gender alone. In fact, the total number of elements that could impact a child's response to stress could be so vast that reaching a conclusive decision about the impact of stress on individual children could be very difficult. The factors that would need to be studied could include but not be limited to age, gender, education level, demographic elements, and social-development level. Other factors that also might need to be considered are religious background, parenting styles, culture, history of family dysfunction, biological and hereditary elements, and possible previous trauma that could result in a more marked reaction to later stressors.

Emotional Intelligence

Emotional intelligence is a theory of multiple intelligence comprised of interpersonal and intrapersonal intelligence. Emotional intelligence integrates both emotional and social skills and should be considered equally valuable to academic skills. Emotional intelligence is derived from two groups of Gardner's intelligence (awareness of inner feelings and a sense of sensitivity to other people's feelings). Emotional intelligence is most important in adolescence because of the rapid emotional changes associated with adolescents' growth. It gives adolescents and teenagers a sense of control for emotion regulation. Although assumed to be mostly learned during childhood, failure to develop strong emotional intelligence usually leads to depression and aggressive behaviors during adolescence (Rathus, 2011).

With reference to Smith (2007), skills needed for self- control, self-awareness, cooperation and empathy are necessary for sound decision-making by adolescents. These skills are critical to making the right choices, especially on issues relating to sex life and drug abuse.

Emotional intelligence is critical in molding the adolescent's brain for making strong emotional responses to meet daily life challenges.

The importance of emotional intelligence in gender, social and economic aspect in adolescents can be divided into five main categories, the first of which is self-awareness. Emotional intelligence creates self-awareness among adolescents. Self-awareness is the ability to understand one's emotions and feelings. It enables an individual to tune into and evaluate his or her true feelings. An understanding of one's true feelings grants an individual the power to manage his or her emotions (Stein, 2009). Self-awareness develops emotional awareness and self-confidence in individuals. Emotional awareness is one's ability to recognize one's emotions together with their effects. Self-confidance on the other hand, increases a person's sense of his or her capabilities and worth. These are both necessary for adolescents to make informed choices relating to gender, social, and economic decisions. For example, self- confidence is crucial to appreciating one's gender, primarily for female adolescents and increases the realization that

one's gender has no effect on one's ability to unleash one's potential.

Self-regulation is the next noteworthy aspect created by emotional intelligence. It is important primarily in adolescents because they have minimal control of their emotions. Self-regulation is of particular significance in adolescents who are dealing with depression, anger, or anxiety. Self-regulation helps develop self control, conscientiousness, trustworthiness, innovation and adaptability (Eissa & Cassady, 2008). Self-control helps the adolescents manage disruptive desires. The virtue of trustworthiness is crucial in the social life of adolescent. Adaptability enhances flexibility when dealing with change, while the virtue of conscientiousness creates responsibility.

Social skills are also enhanced through emotional intelligence. During the adolescent period, these skills are paramount in developing skills in communication, leadership, and collaboration and cooperation (Erkman & Kourkoutas, 2011).

Empathy is another aspect of emotional intelligence. It involves recognizing other people's felling and

emotions. This is critical for the social development of adolescents. Empathy allows an adolescent to understand and appreciate diversity and differences in others (Goleman, 1999).

Lastly, emotional intelligence attempts to create motivation, a crucial ingredient in the development of an adolescent's social and economic life. Motivation enhances commitment and powers the drive to succeed and creates optimism. During this period of adolescence, individuals set important life goals and lay down appropriate measures to achieve them. Hence, motivation created through emotional intelligence is particularly necessary at this stage (Eissa & Cassady, 2008).

Thus, emotional intelligence plays a particularly crucial role in developing the essential life skills of adolescents: motivation, empathy, social skills, self-awareness and self-regulation. These skills constitute social, gender and economic development during the adolescent stage.

CHAPTER THREE

METHODOLOGY

Purpose of the Study

The purpose of this study was to examine emotional intelligence and its impact on the maturation process of male and female early-adolescent youth. Archival data were used in this study to determine if relationships existed between demographic variables (gender, race, socio-economic status, and educational status) and emotionality factors (adaptability, interpersonal stress, intrapersonal stress, general mood, stress management, and overall emotional intelligence).

Research Design

The study utilized a non-experimental, correlational design to examine the role that stress plays on the emotional well-being of male and female early-adolescent youth. A demographic questionnaire and self-report rating scale were utilized to determine if relationships exist between demographic variables (gender, race, socio-economic status, and educational status) and emotionality factors (adaptability, interpersonal stress, intrapersonal stress,

general mood, stress management, and overall emotional intelligence).

Participants/Setting

The ages of 10 – 11 years, approximately the fifth grade, mark the beginning of early adolescence (Jose & Kilburg, 2007). With early adolescence comes the onset of many stressors – physiological, psychological, environmental, and social (Garmezy, 1983). Approximately 70 male and female students from five fifth grade classes were included in the study. The classes include three general education, one inclusion, and one upper learning disabilities. The students attend a second through sixth grade suburban elementary school in South Jersey. For the purposes of the study, this school will be identified as First Elementary School.

First Elementary School is one of four elementary schools in the district. More than 450 students are in attendance. There are four second grade general education classes, three sixth grade general education classes, three 4^{th} grade general education classes, four 5^{th} grade general education classes, three 6^{th} grade general education classes, one inclusion class at each level (i.e. 2^{nd}, 3^{rd},

4th, 5th, & 6th), one lower learning disabilities class (3rd & 4th), and one upper learning disabilities class (5th & 6th).

According to the No Child Left Behind report of 2009 (http://education.state.nj.us/rc/nclb/nclbreport.php?c=15;d=1100;s=105), First Elementary School met annual yearly progress. The attendance rate is above 95%. Of the students, 36% are partially proficient in Language Arts Literacy, while 55% of the students are proficient. The remaining 5% are advance proficient. On state mathematics tests, 16% of the elementary students are partially proficient, while 39% are proficient. Of the students in the school, 44% are advance proficient in mathematics. Of the teaching staff at First Elementary School, 67% have either a Bachelor of Arts degree or a Bachelor of Science degree, while 32% have a Master of Arts degree or a Master of Science degree. None of the teaching staff at First Elementary School possess a doctoral degree.

Source for Data/Procedures

First Elementary School is of particular interest in this study because it is the only school in the district where data were collected to aid school personnel in the development of a stress management curriculum to be

utilized by the guidance counselor. The principal investigator met with the principal of First Elementary School to obtain approval to use the data. The school's curriculum team and guidance department collected the data during routine guidance lessons. The information obtained from the BarOn Emotional Quotient Inventory: Youth Verson (BarOn EQ-i:YV) and demographic questionnaires was anonymously coded in a database.

Measures

BarOn Emotional Quotient Inventory: Youth Version (BarOn EQ-i:YV):

The BarOn IQ-i:YV long form was administered to each fifth-grade student during a routine guidance lesson. According to BarOn & Parker (2000), the BarOn EQ-i:YV is a self-report rating scale designed to measure emotional intelligence in individuals aged 7 to 18 years. Bar-On further explained that the questionnaire is useful in assessing the emotional, personal, and social dimensions of emotional intelligence through its seven scales – total emotional intelligence, interpersonal stress, intrapersonal stress, adaptability, stress management, general mood, and positive impression. These emotional, personal, and interpersonal attributes

ultimately determine one's ability to cope with environmental demands and pressures. The BarOn EQ-i:YV uses a 4-point Likert-style format in which respondents are asked to rate 60 items from "Very Seldom True of Me" to "Very Often True of Me." The BarOn EQ-I:YV is particularly useful in this study because the 10 to 12 year-old age group was the highest in the normative sample with nearly equal representation of male and female students (BarOn & Parker, 2000).

The BarOn EQ-i:YV manual describes in great detail both factorial validity and construct validity. However, a brief overview will be provided. Factorial validity was examined using an exploratory factor analysis based on 40 items that comprised the Intrapersonal Stress, Interpersonal Stress, Stress Management, and Adaptability scales. A viromax rotation supported the conclusion that the four empirical factors that measure emotional intelligence closely matched the four scales of the BarOn EQ-I:YV (BarOn & Parker, 2000). Construct validity reported in the manual endorses the conclusion that the BarOn EQ-i:YV scales positively correlate with the scales of other empirically supported measures such as the Children's

Depression Inventory, the Conners-Wells Adolescent Self-Report scale, and the Connors Parent Rating Scale-Revised (BarOn & Parker, 2000).

Data Analysis

Descriptive statistics were used to describe the population sample. Also, the study utilized several inferential statistics to evaluate the data. A Pearson correlation was utilized to determine the relationship between the BAR-On EQI scales. A multivariate analysis of variance (MANOVA) was used to determine significance between gender and the five scales, SES and the five scales, and ethnicity and the five scales. An analysis of variance (ANOVA) was utilized to determine significance between total emotional intelligence (EQI) and gender, EQI and SES, and EQI and ethnicity.

Delimitations

In research, there are advantages and pitfalls associated with a study, some of which are inherently obvious from the beginning and others emerge during the process. In this current study, there are delimitations to the research design and sample. This study uses a correlation design, which is useful for interpreting the

degree to which the demographic variable correlates with the emotionality factors under study. However, this type of design may not necessarily explain the exact reason for the associations (Meltzoff, 1998). Because this study utilizes an archival sample, it proposes no danger or harmful effects to its participants. In addition, the investigator's biases have no influence over the data. Nevertheless, archival data can be problematic because the investigator has no control over the accuracy of the records. That is, one cannot ensure the qualifications of the examiner or the accuracy of the scoring (Howard, 1985). While the goal of this project is to make a connection between emotional stability and stress, the data set does not allow for that because there were no external indicators of stress to correlate with the emotional stability measures.

CHAPTER FOUR

RESULTS

The analyses reported in this chapter focus on the relationship between the Bar-On EQI scale raw scores (including intrapersonal stress, interpersonal stress, adaptability, stress management, mood, and EQ) and the gender, socioeconomic status (SES), and ethnic group membership of respondents. These findings are based on administration of the Bar-On EQI instrument to a sample of *n = 71* respondents. Findings are arranged in five sections, including descriptive statistics regarding gender, socioeconomic status, and ethnicity; raw and adjusted Bar-ON EQI scales; and outcomes of statistical tests of difference for gender, socioeconomic status, and ethnicity.

Review of the Research Questions

The research questions presented in Table 1 were addressed in this research study.

Table 1

Primary and Secondary Research Questions

Primary Research Questions	Sub-Questions
What is the relationship between the Bar-On EQI scale raw score and gender?	Are females greater than males on intrapersonal stress, interpersonal stress adaptability, stress management, mood, and EQ?
What is the relationship between the Bar-On EQI scale raw scores and socioeconomic status (SES)?	Will students in the upper SES category score higher on intrapersonal stress, interpersonal stress, adaptability, stress management, mood, and EQ?
What is the relationship between Bar-On scale raw scores and ethnic group?	Will Caucasians score higher than ethnic minorities on intrapersonal stress, interpersonal stress, adaptability, stress management, mood, and EQ?

Participant Group Profile

Five basic characteristics were collected for the participant group that provide demographic and educational information about the group. These characteristics include age, gender, educational status, socioeconomic status, and ethnicity. Gender, socioeconomic status, and ethnicity also are used as differentiating factors in further tests (shown

below). Tables 2 through 7 are frequency tables for each of these demographic and educational characteristics.

A general summary of the descriptive statistics finds that the majority (*n = 42*) of the participants are age 12 years, with most of the remaining participants (*n = 28*) being 11 years old.

Most respondents (*n = 42*) are female. Most participants (n = 53) are enrolled in the general educational setting, with the second most common group (*n = 13*) being in the special educational setting. The distribution of SES is relatively even, with only a small minority (*n = 22*) being in the $50,000 to $74,000 group. For ethnicity, more than half (*n = 38*) are Caucasian, with the remaining (*n = 33*) primarily being Black (*n = 16*) or Hispanic (*n = 11*).

Table 2

Frequency distribution of age of participants (n = 71)

		Frequency	Percent
Age	11	28	39.4
	12	42	59.2
	13	1	1.4
		71	100

Table 3

Frequency distribution of gender of participants (n = 71)

	Frequency	Percent
Male	29	40.8
Female	42	59.2
	71	100

Table 4

Frequency distribution of general education status of participants (n = 71)

	Frequency	Percent
General Education	53	74.7
Special Education	13	18.3
Gifted and Talented	5	7.0
	71	100

Table 5

Frequency distribution of socioeconomic status of participants (n = 71)

	Frequency	Percent
Less than $24,999	21	29.6
$25,000 to $49,999	13	18.3
$50,000 to $74,999	22	31.0
$75,000 to $99,999	15	21.1
	71	100

Table 6

Frequency distribution of ethnicity of participants (n = 71)

	Frequency	Percent
Caucasian	38	53.5
Non-Caucasian	33	46.5
	71	100

Note: Non-Caucasian respondents included Black, Hispanic, Asian, American Indian/Alaskan Native, Hawaiian/Pacific Islander, and Other responses. The category was collapsed in order to allow for analysis, and Table 7 shows the decomposition of non-Caucasian minority responses.

Table 7

Frequency distribution of non-Caucasian ethnicities of participants (n = 33)

	Frequency	Percent
Black	16	48.5
Hispanic	11	33.3
Asian	4	12.1
American Indian, Alaskan Native	1	3.0
Hawaiian, Pacific Islander	1	3.0
	33	100

Raw and Standardized Bar-On EQI Test Scores

The second group of descriptive statistics presented is the Bar-On EQI test scores for the entire group. These scores are reported in both raw and standardized forms, and additionally, a correlation table has been constructed for

the scale scores (using the raw scores) to show the relationship among these scores. This information is included within Tables 8 through 10.

In the raw scores (Table 8), the coefficient of variation shows that intrapersonal stress and stress management are the most widely varying scales and that interpersonal stress and EQ varied the least. However, in the standardized scores (Table 9), mood and intrapersonal stress are the most variant, while stress management and intrapersonal stress are the least variant. The correlations in Table 10 show significant positive correlations between all pairs of variables except for adaptability and intrapersonal stress. The strongest correlation is between EQ and interpersonal stress (.770), while the weakest significant correlation is between stress management and intrapersonal stress (.338).

Table 8

Descriptive statistics for Bar-On EQI test outcomes (raw scores)

	N	Mean	Median	Mode	Standard Deviation	Coefficient Of Variance	Range
Intrapersonal Stress	71	14.27	15.00	15	4.032	.283	18
Interpersonal Stress	71	40.48	41.00	38*	5.606	.138	32
Adaptability	71	29.23	30.00	27*	5.232	.179	22
Stress Management	71	34.86	36.00	36	7.780	.223	37
Mood	71	47.10	50.00	51*	8.372	.178	38
EQ	71	58.04	59.00	58	8.378	.144	40

*Note: Modes marked with * indicate multiple modes were found. Only the smallest mode is reported.*

Table 9

Descriptive statistics for Bar-On EQI test outcomes (standardized scores)

	N	Mean	Median	Mode	Standard Deviation	Coefficient Of Variance	Range
Intrapersonal Stress	71	100.11	102.00	102	15.811	.158	71
Interpersonal Stress	71	102.92	105.00	111*	14.904	.145	37
Adaptability	71	99.89	102.00	94*	14.683	.147	63
Stress Management	71	104.08	106.00	101	14.55	.140	62
Mood	71	99.83	106	119	18.295	.183	84
EQ	71	102.07	103	102	15.779	.155	75

*Note: Modes marked with * indicate multiple modes were found. Only the smallest mode is reported.*

Table 10

Correlation matrix – Raw Score Correlations (n = 71)

	Intrapersonal Stress	Interpersonal Stress	Stress Management	Adaptability	Mood	EQ
Intrapersonal Stress	1.000	.363* .002	.338* .004	.218 .068	.473* .000	.681* .000
Interpersonal Stress	.363* .002	1.000	.542* .000	.440* .000	.765* .000	.770* .000
Stress Management	.338* .004	.542* .000	1.000	.510* .000	.550* .000	.762* .000
Adaptability	.218 .068	.440* .000	.510* .000	1	.456* .000	.707* .000
Mood	.473* .000	.765* .000	.550* .000	.456* .000	1	.759* .000
EQ	.681* .000	.770* .000	.762* .000	.707* .000	.759* .000	1

*Note: * Indicates that the correlation is significant at the p < .05 level or lower (two-tailed)*

Gender Differences

The first set of inferential tests (corresponding to research question 1 and its sub-questions) was focused on differences between genders. The tests used for this analysis include one-way ANOVA (for EQ differences by

gender) and multivariate ANOVA (MANOVA) (for differences in intrapersonal stress, interpersonal stress, stress management, adaptability, and mood by Gender). Tables 11 (multivariate analysis) and 12 (ANOVA) show the outcomes of these tests. These analyses were performed using the raw scores rather than the standardized scores.

Tables 11 and 12 show information related to the multivariate analysis for subscales including intrapersonal stress, interpersonal stress, stress management, adaptability, and mood when analyzed by gender. As Table 12 shows, there are some differences between the means in every scale. However, Table 11, which shows the test of between-subjects effects, shows that the only variable that had a significant difference in means by gender was stress management *(F(1, 71) = 5.129, p = .027)*. Although the other variables also had differences in means, none of them approached significance. Table 12 shows that the mean stress management scale scores for girls (*M* = 36.548, *SE* = 1.167) were higher than those for boys (*M* = 32.414, *SE* = 1.404). This suggests that girls had higher stress management scores overall, though boys had more variability (as indicated by the higher standard error.)

Table 11

Tests of between-subjects effects for Gender and Bar-On EQI scales (raw scores)

D.V.	Df.	F	Sig.
Intrapersonal Stress	1	1.715	.195
Interpersonal Stress	1	2.300	.134
Stress Management	1	5.129	.027*
Adaptability	1	.280	.598
Mood	1	1.768	.188

*Note: Factors marked with * are significant at p < .05 or lower.*

Table 12

Estimated marginal means per gender for Bar-On EQI scales (raw scores)

Scale	Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Intrapersonal Stress	Male	13.517	.745	12.031	15.003
	Female	14.786	.619	13.551	16.021
Interpersonal Stress	Male	39.276	1.031	37.218	41.334
	Female	41.310	.857	39.600	43.019
Stress Management	Male	32.414	1.404	29.613	34.214
	Female	36.548	1.167	34.220	38.875
Adaptability	Male	28.828	.977	26.879	30.776
	Female	29.500	.812	27.881	31.119
Mood	Male	45.517	1.546	42.433	48.602
	Female	48.180	1.285	45.627	50.754

The second test performed for this question was a one-way ANOVA comparing the means of EQ (total scores for Emotional Intelligence Quotient) between genders. Tables 13 and 14 show the ANOVA outputs (including ANOVA summary, marginal means, and Levene's test) that are relevant to the

ANOVA for this case. The Levene's test for equality of error variances *(F(1,69) = 1.033, p = .313)* indicates that the assumption of homogeneity of variance between groups is not broken.

Table 13

ANOVA of Gender and EQ raw score

Source	df.	F	Sig.
Gender	1	2.892	.094

Table 14

Estimated Marginal means (EQ by Gender)

Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	56.034	1.535	52.972	59.097
Female	59.429	1.276	56.884	61.973

Given the findings of these tests, research question 1 can be answered as follows. Of the subscales intrapersonal stress, interpersonal stress, stress-management, adaptability, and mood, only stress management showed a significant difference in means based on gender. The stress-management scale scores indicated that girls

generally scored higher on Stress Management than boys did (indicating that girls have somewhat better self-reported stress-management skills). The ANOVA test similarly did not show a significant difference in means between boys and girls on EQ scores. Thus, of research sub-questions for question number one (*are females greater than males on stress management)* the answer is affirmative. The other five scales did not show any significant differences in outcomes.

Socioeconomic Status Differences

The second area of examination was whether socioeconomic status (SES) made a difference in the outcomes of either the component scales or the EQ score of respondents. SES was divided into quartiles ranging from less than $24,999 to $75,000 to $99,999. The majority of respondents reported family incomes of under $24,999 or $50,000 to $74,999, with the remaining respondents split between the two variables. Tables 15 and 16 show the outcomes of the multivariate ANOVA tests and ANOVA used to determine the outcomes of these tests.

Tables 15 and 16 show the outcomes for multivariate ANOVA between SES and dependent variables (including intrapersonal stress, interpersonal stress, stress management, adaptability, and mood). In the test of between subjects effects (Table 15), the only effect significant at $p < .05$ was adaptability $(F(3,67) = 3.316, p = .025)$. However, mood $(F(3,67) = 2.545, p = .063)$ did approach statistical significance, meeting a criterion of $p < .10$. This could indicate that in a larger or more representative sample this between-subjects effects test could be significant. Table 16 shows the descriptive statistics for each scale by SES. Further, table 16 shows that for adaptability, scale scores generally increase with SES. However, Table 17 shows more detailed post-hoc analysis that outlines differences between the groups (using Tukey HSD analysis).

Table 15

Test of between-subjects effects for socioeconomic status and Intrapersonal Stress, Interpersonal Stress, Stress Management, Adaptability, and Mood

Scale	Df.	F	Sig.
Intrapersonal Stress	3	2.118	.106
Interpersonal Stress	3	.969	.413
Stress Management	3	.896	.448
Adaptability	3	3.316	.025*
Mood	3	2.545	.063**

*Notes: *Indicates that the test is significant at the p < .05 level. ** indicates that the test is significant at the p < .10 level.*

Table 16

Descriptive statistics for SES groups for Intrapersonal Stress, Interpersonal Stress, Stress Management, Adaptability, and Mood

Scale	Socioeconomic Status Group (Family Income)	Mean	Standard Deviation	N.
Intrapersonal Stress	Less than $24,999	13.05	4.129	21
	$25,000 to $49,999	13.85	3.671	13
	$50,000 to $74,999	15.95	3.922	22
	$75,000 to $99,999	13.97	3.907	15
	Total	14.27	4.032	71
Interpersonal Stress	Less than $24,999	38.95	4.717	21
	$25,000 to $49,999	42.08	2.985	13
	$50,000 to $74,999	40.45	7.183	22
	$75,000 to $99,999	41.27	5.812	15
	Total	40.48	5.606	71
Stress Management	Less than $24,999	32.67	8.610	21
	$25,000 to $49,999	35.54	9.180	13
	$50,000 to $74,999	35.27	5.914	22
	$75,000 to $99,999	36.73	7.769	15
	Total	34.86	7.780	71
Adaptability	Less than $24,999	26.62	4.557	21
	$25,000 to $49,999	30.85	3.288	13
	$50,000 to $74,999	29.27	5.101	22
	$75,000 to $99,999	31.40	6.401	15
	Total	29.23	5.232	71
Mood	Less than $24,999	43.48	8.847	21
	$25,000 to $49,999	51.08	5.139	13
	$50,000 to $74,999	48.05	9.116	22
	$75,000 to $99,999	47.33	7.451	15
	Total	47.10	8.372	71

Given that only adaptability showed significant difference between groups, only results for adaptability are shown in Table 17, which includes Tukey HSD tests for

comparison between groups. These outcomes show that although there are differences between every group, the only statistically significant difference was between the Under $24,999 group and the $75,000 to $99,999 group, with a mean difference of -4.78 *(p = .030)*.

Table 17

Outcomes of post-hoc testing (including Tukey HSD and Games-Howell) for Adaptability by SES

Test	(I) SES	(J) SES	Mean Difference (I – J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Under $24,999	$25,000 to $49,999	-4.23	1.761	.087	-8.87	.41
		$50,000 to $74,999	-2.65	1.522	.310	-6.66	1.36
		$75,000 to $99,999	-4.78	1.687	.030*	-9.23	-.34
	$25,000 to $49,999	Under $24,999	4.23	1.761	.087	-.41	8.87
		$50,000 to $74,999	1.57	1.746	.804	-3.03	6.17
		$75,000 to $99,999	-.55	1.891	.991	-5.54	4.43
	$50,000 to $74,999	Under $24,999	2.65	1.522	.310	-1.36	6.66
		$25,000 to $49,999	-1.57	1.746	.804	-6.17	3.03
		$75,000 to $99,999	-2.13	1.671	.583	-6.53	2.28
	$75,000 to $99,999	Under $24,999	5.78	1.687	.030*	.34	9.23
		$25,000 to $49,999	.55	1.891	.991	-4.43	5.54
		$50,000 to $74,999	2.13	1.671	.583	-2.28	6.53

*Notes: Differences marked with * indicate a statistical significance of p < .05.*

The final test in this area was a one-way ANOVA, testing differences in means in EQ between SES groups.

Tables 18 and 19 show the outcomes of these tests. While the significance of the test *(F (3,67) = 2.675, p = .054)* does approach the level of *p < .05* required for statistical significance, it does not reach the level indicating that there is no statistical significance in difference in means in EQ by socioeconomic status.

Table 18

Between-subjects effects test (SES and EQ raw score)

Source	df.	F	Sig.
SES	3	2.676	.054

Notes: R-squared = 0.40 (Adjusted r-squared = 0.26)

Table 19

Descriptive statistics (EQ by SES)

SES Group	Mean	Std. Deviation	N
Under $24,999	53.86	9.112	21
$25,000 to $49,999	60.23	4.746	13
$50,000 to $74,999	59.59	8.612	22
$75,000 to $99,999	59.83	8.013	15
Total	58.04	8.378	71

Given the outcomes of these tests, an answer can be found for Research Question 2. Of the five scale variables (intrapersonal stress, interpersonal stress, stress management, adaptability, and mood), only adaptability was

found to have a significant difference between SES categories, although the mood scale variable approached a significant difference (and could achieve significance in a broader or more representative sample). In post-hoc Tukey HSD testing, the only significant difference in these groups was between the under $24,999 SES group and the $75,000 to $99,999 income group (the highest and lowest groups), with the higher income group showing a mean difference of 4.78 points as compared to the lower SES group. Thus, for research sub-questions for questions 2, the questions that asked *will students in the upper SES category score higher on adaptability?* can be answered in the affirmative.

Ethnicity Differences

The final category of differences on which Bar-On EQI scales and scores are tested is ethnicity. Although the initial testing collected data across multiple ethnicity categories (including Caucasian, Black, Hispanic, Asian, American Indian and Alaskan Native, and Hawaiian and Pacific Islander), categories were collapsed to Caucasian and non-Caucasian for the purposes of this analysis. Table 20 presents the analysis for these areas. Table 20 shows

that even in the raw figures, an examination of the means within most categories shows that these are highly similar, indicating that there are few differences between the categories.

Table 20

Descriptive statistics for Ethnicity groups (Caucasian and non-Caucasian) for Intrapersonal Stress, Interpersonal Stress, Stress Management, Adaptability, and Mood

Scale	Socioeconomic Status Group (Family Income)	Mean	Standard Deviation	N.
Intrapersonal Stress	Caucasian	14.47	4.125	38
	Non-Caucasian	14.03	3.972	33
	Total	14.27	4.032	71
Interpersonal Stress	Caucasian	40.55	5.949	38
	Non-Caucasian	40.39	5.273	33
	Total	40.48	5.606	71
Stress Management	Caucasian	34.45	6.845	38
	Non-Caucasian	35.33	8.820	33
	Total	34.86	7.780	71
Adaptability	Caucasian	28.97	5.435	38
	Non-Caucasian	29.52	5.057	33
	Total	29.23	5.232	71
Mood	Caucasian	46.34	9.260	38
	Non-Caucasian	47.97	7.261	33
	Total	47.10	8.372	71

The descriptive statistics in Table 21 show that there is little difference in the means of the EQ score and ethnicity.

Table 21

Descriptive statistics (EQ by Ethnicity)

SES Group	Mean	Std. Deviation	N
Caucasian	57.74	8.196	38
Non-Caucasian	58.39	8.696	33
Total	58.04	8.378	71

The results in this section referred to research question 3. The findings indicate that there is no statistically significant difference in either the Bar-On scale scores or the EQ score based on ethnicity group. This may have varied if the decomposed non-Caucasian scores were used, however.

Summary

The findings of this analysis can be summarized generally as follows. First, in regard to research question 1 (What is the relationship between the Bar-On EQI scale raw scores and gender?), the only difference found was in stress management, with girls reporting a statistically significantly higher score than that of boys in the stress-management category. In terms of Research Question 2 (What is the relationship between the Bar-On EQI scale raw scores and socioeconomic status?), the only difference found was in adaptability. In this case, the highestSES group (family

income of $75,000 to $99,999) reported a significantly higher adaptability score than that of the lowest-SES group (family income of less than $24,999). While the mood variable approached significance, it did not quite meet the significance requirements. Finally, no statistically significant difference was found in regard to question research 3 (What is the relationship between Bar-On EQI scale raw scores and ethnic group?).

Chapter 5 discusses these results in the context of the previous literature on the topic, highlighting areas where there are differences and similarities between the findings of this study and others. It also discusses implications of these findings for EQ theory and its application, particularly in early adolescence. This discussion will support recommendations for further theoretical and practical development.

CHAPTER FIVE

DISCUSSION

The current study was initiated to gain a better understanding of emotional intelligence and its impact on maturational process of male and female early adolescent youth. This chapter will focus on a discussion of the results, beginning with a brief summary of the key findings from the statistical analyses. Couched within the discussion of the research questions are underlying assumptions about emotional intelligence and how it impacts gender in early adolescence. Finally, future implications and limitations will be offered with a summary statement.

Summary of Key Findings

The key findings of this research were based on three main research questions, including:

1. What is the relationship between the Bar-On EQI scale raw scores and gender?
2. What is the relationship between the Bar-On EQI scale raw scores and socioeconomic status (SES)?
3. What is the relationship between the Bar-On EQI scale raw scores and ethnicity?

These research questions were tested across five subscales (Intrapersonal Stress, Interpersonal Stress, Adaptability, Stress Management, and Mood), as well as the overall EQ score. These research findings were generated in SPSS.

The sample *(n = 71)* was primarily aged 12 years, and most respondents were females. The majority of respondents were enrolled in general education, with the majority of the rest enrolled in special education. The majority of the respondents were Caucasian. Distribution of SES level was bimodal, with most respondents having a family income of less than $24,999 or between $50,000 and $74,999.

In terms of the distribution of scores, the raw scores showed a higher degree of variability in intrapersonal stress and stress management, with lower variability in interpersonal stress and overall EQ. All pairs of variables except Adaptability and Intrapersonal Stress showed statistically significant correlations, with the strongest correlation being between EQ and Interpersonal Stress *(r = .770)*.

Inferential tests for the relationship between demographic categories (Gender, SES, and Ethnicity) and EQ and its subscales were performed using one-way ANOVA (for

EQ differences by demographic category) and MANOVA (for subscale differences by demographic category). Testing for gender showed that only Stress Management *(F(1, 71) = 5.129, p = .027)* had a significant difference, with girls having higher Stress Management scores. No difference was found between genders for EQ. Testing for SES also showed limited differences, with only Adaptability *(F(3,67) = 3.316, p = .025)* reaching significance for the subscales. This difference stemmed from a significant gap between those with family income under $24,999 and those with family income from $75,000 to $99,999 (with the low-SES group having a mean difference of -4.78 from the high-SES group). There was no significant difference in EQ by SES. There were no significant differences for EQ or its subscales by Ethnicity.

Contextualization with Existing Literature

Clearly, the findings of this research do not support a strong relationship between demographic characteristics such as, Gender, SES, and Ethnicity, and the outcomes of the Bar-On EQI scale scores or total score (when tested using the raw scores). This suggests that there are no major differences based on demographic grouping among early

adolescents that can be detected using this score (although, of course, there are multiple emotional intelligence scales, and results could vary depending on the scales used within the research). While these findings are not necessarily illuminating in terms of differences between adolescent groups, they do provide an excellent opportunity for practice, since the differences in individual performance can be presumed to be largely the result of the individual variations in stress management and emotional intelligence, allowing for more careful targeting of assistance for children in need.

There is no doubt that continued exposure to stress can negatively affect the developing adolescent as research has clearly stated. However, some children who experience stress do not necessarily have negative outcomes. These children are described as resilient – able to adapt to and respond to stress appropriately. Although it is unclear in this research project, it is possible that the respondents may have scored high on the stress-management scale because of their awareness of stress thereby making them stress "resistant" and better able to benefit from positive role

models, positive parental support, or good social support (Dubow & Tisak, 1989; Garmezy, 1983; Rutter, 1983)

First, there is a clear need to be able to identify within the individual child the effects of interpersonal stress and stress-management skills in order to prevent harm that could be irrevocable. The need for the ability to determine whether a given child is undergoing stress-management strains or excessive degrees of stress, as tested by the Bar-On EQI scale, is outlined by a number of studies that highlight the effects of interpersonal stress and stress management effects on academic achievement and school experience (Beebe-Frankenberger, Lane, Bocian, Greshem, & MacMillian, 2005; Webster-Stratton, Reid, & Hammond, 2004). In particular, these children may face negative reactions from teachers, as these children often have difficulty coping with interpersonal stress in the classroom or in social settings outside the classroom (Lane, Givner & Pierson, 2004). Thus, this both negatively affects the child's ability to achieve academically and negatively affects the teacher's willingness to assist in adjustment of the learning and social environment. By the mid-1980s, it was recognized within the literature that

children previously perceived as acting out or disruptive were in fact having difficulty in managing interpersonal relationships, rather than being deliberately disruptive (Chandler, 1984). However, the problems that face children and that may negatively affect their ability to function, including social issues, changes to family dynamics, and learned individual coping skills learned, still may be regarded as adult problems or may not be recognized by the teacher or classroom assistant (Appleyard, Egeland, Van Dulmer, & Sroule, 2005; Anshel & Delany, 2001; Garmezy, 1983; Bradley & Corwyn, 2002). Thus, there is a clear requirement that schools should be able to transform behavioral observations, such as acting out, into a more concrete causation, such as family stress, social stress, poverty effects, or physiological or social issues. Furthermore, the research suggests that the school environment, in which children already are accustomed to structured learning and teaching activities, may be ideal for learning coping skills and resiliency of this type (Brooks, 2006; De Wolfe & Sanders, 1995). However, in order to do so, the school will need tools to use.

The current study does not support that demographic characteristics, including Gender, SES, and Ethnicity, can be used to predict dimensions of emotional intelligence in any particularly useful fashion. In fact, it implies the opposite. There were only a few significant relationships between these demographic characteristics and various subscales of the EQI score. The existing literature, however, does support a difference in the outcomes of the test based on known differences in coping skills based on these demographic characteristics. Thus, the findings of this research were slightly surprising.

The evidence for support for the literature findings is strongest in the area of gender, which showed that females had significantly higher stress-management skills than those of males (the only category which was important). The connection between EQI subscale scores and overall score and gender was suggested by a number of studies detailing the connection between gender and stress management and indicators of stress. Many of these differences have focused on biological stress indicators. For example, Davis and Emory (1995) found physical differences in stress response between male and female

newborns, with male newborns showing more sustained cortisol level increases and female newborns showing increases in heart rate but not in cortisol levels. This suggests that females may have more resilience biologically to stress than males.

A second study performed on newborns showed that male newborns showed a stronger stress response than females, including asymmetric brain activity and outward stress signals, such as crying (Fox, Bell, & Jones, 1992). However, these results were not conclusive. An observational study conducted on preschool children in China also showed that female children showed fewer outward signs of stress than did male children, though the reasons for this reduction in stress were unclear (Karns, Meredith, & Wang, 2003). At the elementary level, a study also found that female children were more likely to use stress management techniques, such as problem-solving or social support, than were male children (Causey & Dubow, 1992). However, a number of studies have shown that under conditions of unusual stress, there is no evidence that female children have better ability to cope with stress (Ruckman, Young & Pierce, 1999; Smith & Prior, 1995).

Overall, the literature provides some support for gender-based difference in stress management skills, but these differences are conflicted and contested, and may not hold up under conditions of abnormal stress. Overall, the findings suggest (relatively weak) support for the literature's conclusion that girls have somewhat stronger stress management techniques than those of boys. Some research has indicated that girls tend to have better stress management skills than boys due largely because of the girls' ability to seek support by getting help and utilizing active coping to reduce or remove the stressor. On the other hand, boys tend to use avoidance strategies that do not deal with the stress at all (Gilbert & Orlick, 1996).

However, there is no evidence from the findings, especially the interpersonal stress and intrapersonal stress markings, that girls do not actually experience as much stress as boys. These scales were statistically similar. This is contradictory to the physical studies on newborns, which suggest that female newborns actually have a reduced physical stress response.

The only difference found in socioeconomic status (SES) is in adaptability between children with a family income below $24,999 and those with a family income between $75,000 and $99,999 (that is, the lowest and highest SES groups). There are a number of suggested risk factors for differences in social skills based on SES. These include negative parenting and the absence of positive parenting (in particular involvement and optimism) in lower-SES groups (Bradley & Corwyn, 2002; Webster-Stratton et al. 2001). Additional stressors that may affect adaptability in low-SES families could include domestic violence and substance abuse, although these factors also occur in higher-SES families (Anshel & Delany, 2001; Bradley & Coryn, 2002; Garmezy, 1993). However, a more significant issue is likely the ability to create protective boundaries and provide nurturance and support for children undergoing stress, which higher-SES families are more likely to have the time and resources available to do (Anthony et al. 2005).

Although this research project did not include parent educational level as a mediating factor, it is important to note that families who are in lower-SES brackets tend to

have low educational levels (i.e. high school) as compared to families in higher-SES brackets (i.e., graduate degrees Rutter, 1985). Ristkari et al. (2008), concluded in their study of young adolescents that lower parent educational levels were associated with poor self-coherence which can lead to a decreased ability to faces life's challenges and manage stress.

Furthermore, lower-SES families may face strains on resources that impose physiological stress on children, including food scarcity and other factors (Bradley & Corwyn, 2002). Early physical stress, such as malnutrition or food scarcity as well as emotional stress, could result in dysregulated hypothalamic-pituitary-adrenal axis activity, causing behavioral symptoms, including hyperactivity and hostility, impaired immune system; and dysregulation of the serotonin system (Bradley & Corwyn, 2002).

In addition, the research supports the notion that parenting styles can impact negatively the emotional well-being of an adolescent (Bradley & Corwyn, 2002; Webster-Stratton et al., 2001; Webster-Stratton & Reid, 2003). Bradley & Corwyn (2002) concluded that parents who engage

in extremely harsh or extremely lax parenting styles can create low self-esteem and inappropriate social adjustment their in adolescents. According to Webster-Stratton et al. (2001), positive parenting among children with behavioral problems results in positive outcomes when psycho-social interventions are instituted.

The least evidence for differences between groups was found for ethnicity, which showed no significant differences in any of the subscales or the main EQ score. In some respects, this was expected, given relatively little evidence for differences in ethnicity and stress response.

Furthermore, other studies regarding stress response in children (many of which have been detailed previously) do not show a difference in stress response in other situations (Anshel & Delany, 2001; Bradley & Corwyn, 2002; Causey & Dubow, 1992; Garmezy, 1983; Smith & Prior, 1995; Ruckman, Young & Pierce, 1999). Thus, this response was not unexpected in this study, as ethnicity was included primarily for demographic completeness. However, there are still some potential issues in this finding. In particular, there is the suggestion within these findings that

perceptions of difference in stress response and behavior attributed to differences in ethnicity may, in fact, be magnified by internalized stereotyping.

Conversely, cultural and ethnic differences can be difficult to identify, particularly from a psychological or developmental perspective. However, research does support the notion that child-rearing practices can be inherently different from one culture to the next. In a study in patriarchal Sudan, Badri, (1978) observed child-rearing practices in which the parents had no patience with active, curious, and inquisitive children. Instead they insisted on their children being quiet and obedient. In a study conducted by Grotberg, Badri, and King (1987), child-rearing practices contrasted significantly. The researchers observed parents encouraging their children to talk and share their feelings, showing their children how to solve problems, and helping their children feel safe.

Cultural factors should be taken into consideration when planning stress-management and social-skills interventions for individuals or groups.

Limitations

There are a few limitations within the design and

measurement of this study that may have compromised the study.

One of the limitations relates to the use of archival data. When utilizing archival data, a researcher has to rely on data that were previously collected by another person. The researcher has no control over the data collection procedures, such as administering and scoring the protocols and inputting data in a database.

Another limitation of the study is the small sample size of fifth-grade students at one elementary school in one township. This limitation makes it difficult to generalize the findings to other grade levels, other schools (i.e suburban vs. urban), other geographical regions of the United States, and other ethnic or culturally diverse groups.

A further limitation of the study is that the data set did not allow the examination of external of stressor so one could correlate emotional stability to. Without the use of external stressors in this study, the researcher has no way of knowing which external factors could have increased or decreased each emotionality scale.

Implications for Research and Practice

Although children may struggle with stress management and coping skills, as noted previously, this does not mean that nothing can be done for them. A number of studies have shown that intervention programs that teach positive behavioral and emotional responses and characteristics such as resilience and stress-management can provide valuable support for the development of effective coping skills (De Wolfe & Saunders, 1995; Hampel, Meier, & Kummel, 2008; Pincus & Friedman, 2004; Romano, Miller, & Nordness, 1996; Zins, Elias, & Greenberg, 2003). In particular, developing interpersonal and intrapersonal skills, and stress management skills and improving access to stress-management resources can improve social and academic outcomes for children (McGinnis & Goldstein, 1997; Nettles, Mucherah & Jones, 2000).

In order for children to be offered intervention programs, there needs to be an approach in place to identify students who require intervention and assistance. A number of existing approaches collect this information, with most of these methods based on student self-reporting

of emotional characteristics and state (Zins, Elias, & Greenberg, 2003). However, self-reporting is routinely ineffective, particularly among younger children, who may not be able to effectively describe stress signs, for example, attributing physical signs of stress to bodily illness (Taxis et al, 2004). Thus, there needs to be a more robust approach to determining which children are in need of social learning skills.

On the one hand, the findings of this report suggest that potentially all students could benefit from improved social skills and a social learning curriculum, since there are so few significant differences in outcomes based on demographics (especially socioeconomic status). This is consistent with the social and emotional learning (SEL) approach suggested by Norris (2003), in which all students are offered a curriculum for learning interpersonal and intrapersonal skills, coping mechanisms, and stress management techniques. In many respects, this research most clearly supports the SEL approach; the lack of a strong degree of difference among students based on their demographic characteristics, suggests that all students

could use improvement in these areas, making a general curriculum plausible.

On the other hand, the findings of this study also suggest that there should be a modified approach to determining which students require improved access to social skills training (Lane, Menzies, Barton-Arwood, Doukas, & Munton, 2005; Ogilvy, 1994). Social skills training is a specific approach that is intended to rectify observed deficits in social interaction styles, stress management, and interpersonal relationship formation and management (Ogilvy, 1994; Lane, Menzies, Barton-Arwood, Doukas, & Munton, 2005). This approach is targeted, rather than general, and allows for specific learning of deficit-related skills. Approximately 15 to 22% of children in the United States may merit intervention using a social skills approach (Elksnin & Elksnin, 2003). Of course, if a general SEL approach were used, this figure could fall significantly, as children would pre-learn coping and social skills appropriate to their developmental level.

However, there is still a significant need for the ability to determine which children require additional social skills assistance, as assessment which could be

particularly difficult during the turbulent adolescent period and under conditions where home life and conditions are not known. The relative lack of significant differences in mean between students based on demographic characteristics, suggests that the Bar-On EQI instrument would be a useful rapid screening tool for determining which students may require additional assistance in social skills learning. The use of the Bar-On EQI instrument, which asks specific and measurable questions and has an established baseline of normal response, would help teachers and administrators overcome assessment problems, including reluctance to self-report specific issues and the known tendency of children and young adolescents to interpret the effects of interpersonal and intrapersonal stress as physical illness (Taxis et al. 2004).

In short, while the findings of this research do not generally support expected mean differences in emotional coping and stress management skills, they do identify a change to practice that could be used to improve practice significantly in terms of identifying which children may require additional social skills support. This could prove to be invaluable in terms of determining how the school's

resources can be used best to support students and provide improved social learning and experience.

Given the findings of this research, the main recommendation for practice is that the Bar-On EQI test should be considered for use as a screening tool in order to determine which children require additional social supports. Of course, this cannot be undertaken as a sole screening method, since a number of psychological and physiological conditions can cause similar social function issues, and they need to be accounted for as well. Additional research also should be conducted in order to verify that this approach is effective in screening children who require additional social skills training. This is particularly relevant given that this study did not attempt to identify individual behaviors or correlate these behaviors with EQI scores; thus, this research needs to be done in order to verify that the Bar-On EQI test is appropriate for identifying children with additional needs for social skills intervention. A subsequent study could be conducted in order to establish the effectiveness of the Bar-On EQI test as a screening instrument.

Summary

In terms of statistical outcomes, this research had a relatively low level of findings, with only a few statistically significant relationships between the EQ scores and subscale scores (raw scores) and demographic variables including Gender, SES, and Ethnicity. This finding was an unexpected given the existing research, which indicates that there could be a number of different effects from these demographic variables that may change the outcomes. These findings generally did not support the existing research, which shows that demographic variables can result in conditions that change stress management and coping skills as well as the stresses that a child can expect to encounter. However, while these results are somewhat disappointing in terms of identifying potential differences in adolescents' coping skills generally, they do have important implications for practice. In particular, if there are few differences among Bar-On EQI scale scores based on demographic variables, this suggests that the instrument will be reliable in assessing emotional intelligence and its various components, including stress

management and other important variables, for a wide range of adolescents. This is a potentially significant area of practice that could be enhanced or improved, as effectively screening adolescents for stresses and coping skills is vital to provision of services to assist in stress management.

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APPENDIX A

School District Approval Letter

DEPTFORD TOWNSHIP BOARD OF EDUCATION

Dr. Joseph F. Canataro, Superintendent of Schools
Carolyn Morehead, Assistant Superintendent
2022 Good Intent Road • Deptford, New Jersey 08096
Board Office: (856) 232-2700 Fax: (856) 227-7473
http://www.deptford.k12.nj.us
"Educating *everyone* takes *everyone:*
everyone *means* everyone."

June 8, 2011

Dr. Yuma Tomes
Philadelphia College of Osteopathic Medicine
4190 City Ave., Suite 226
Philadelphia, PA 19131

Dear Dr. Tomes:

I am writing this letter to confirm that Alicea Davis, School Psychologist with the Deptford School District is hereby granted permission to use data that was previously collected by Lake Tract School during a guidance curriculum initiative. Please contact me with any questions.

Sincerely,

Kathleen Klausner
Principal, Lake Tract School
Deptford, NJ 08096

APPENDIX B

Demographic Questionnaire

Demographic Questionnaire

Participant ID Number _____

Please answer the following questions.

1. What is your child's gender? (circle one)

   Male Female

2. What grade is your child in?_____

3. How old is your child? _____

4. What educational program is your child in? (circle one)

   general education
   special education
   gifted and talented

5. Which ethnicity does your child belong? (circle one)

   Caucasian
   Black
   Hispanic
   Asian
   American Indian/Alaskan
   Hawaiian/Pacific Islander
   Other

6. Which income bracket are you in? (circle one)

   24,999 or below
   25,000 - 49,999
   50,000 - 74,999
   75,000 - 99,999
   100,000 or above